

## **TECHNICAL REVIEW AND EVALUATION**

### **OF**

### **AIR QUALITY PERMIT # 47688**

#### ***Phoenix Cement Company – Camp Verde Gypsum Mine***

## **I. INTRODUCTION**

This Class II synthetic minor renewal permit is for the operation of a crushing and screening plant. This is a stationary facility located at Camp Verde Gypsum Mine in Camp Verde, Yavapai County, Arizona. This permit renews and supersedes Operating Permit #28116.

### Company Information

1. Mailing Address: Phoenix Cement Company  
P. O. Box 428  
Clarkdale, AZ 86324
2. Facility Address: Camp Verde Gypsum Mine  
5 Mi. East of Camp Verde, Hwy 260  
Camp Verde, AZ 86322

## **II. FACILITY DESCRIPTION**

The Phoenix Cement Company (PCC) Camp Verde Gypsum Mine (CVGM) is located in Yavapai County near Camp Verde Arizona. The two types of gypsum produced at PCC CVGM are industrial gypsum, which is used for cement manufacturing at the PCC Cement Manufacturing facility located in Clarkdale, Arizona and agricultural gypsum, which is sold in Arizona and adjoining states for use as a soil additive.

Approximately 100,000 tons per year of raw gypsum are required to satisfy the total demand of the customers and area supplied with gypsum from the CVGM. The total tons of material mined are ultimately determined by the product demand, the product mix, and the percent wash out.

Gypsum at the CVGM is located very close to the surface, and as a result, is mined by the open pit method. Any overburden, if present, is removed and may be used in any of the following applications: building up roadways, stockpiled for later use during reclamation, and spread over unused disturbed areas to promote regrowth of vegetation.

The process description at CVGM is as follows:

Raw gypsum is removed from the pit area with a scraper, transported to an area adjacent the primary crusher and stockpiled.

During crushing operations, material is crushed to a 2-inch top size through the primary and secondary crusher, and placed into a stockpile. Material from the stockpile is then used as feed for the wet plant.

During wet plant operations, material from the stockpile is fed into the log washer. Approximately 26% of the material fed to the log washer is washed out as silt. The material emanating from the log washer is fed onto the wet screen, which serves to wash out any remaining silt and to de-water the remaining gypsum.

### **III. COMPLIANCE HISTORY**

There have been three file reviews associated with this facility. The most recent report review was completed on February 28, 2008. No air quality cases and/or violations have been developed for this facility.

### **IV. IMPACTS ON LEARNING SITES**

In accordance with ADEQ's Environmental Permits and Approvals Near Learning Sites Policy, the Department conducted an evaluation to determine if any nearby learning sites would be adversely impacted by the facility. Learning sites consist of all existing public schools, charter schools and private schools at the K-12 level, and all planned sites for schools approved by the Arizona School Facilities Board. The learning sites policy was established to ensure that the protection of children at learning sites is considered before a permit approval is issued by ADEQ.

The Department did not identify any learning sites within two miles of the Phoenix Cement Company-Camp Verde Gypsum Mine Facility.

### **V. EMISSIONS**

<b>Pollutant</b>	<b>Potential-To-Emit With Controls (tpy)</b>
PM <sub>10</sub>	3.33
PM	7.98

### **VI. APPLICABLE REGULATIONS**

The Permittee has identified the applicable regulations that apply to each unit in its permit application. The following table summarizes the findings of the Department with respect to the regulations that are applicable to each emissions unit. Previous permit conditions are discussed under Section VII of this technical review document.

### Applicable Regulations

Unit ID	Year of Manufacture	Control Equipment	Applicable Regulations	Verification
<b>Crushing Screening Equipment</b>	1959 1969 1975 1978 1979	Water Suppression Measures	<u>A.A.C.</u> R18-2-702.B R18-2-722.B R18-2-722.D R18-2-722.F R18-2-722.G	The crushers and screens are used to crush/screen raw gypsum into 2-inch size pieces. Since the material being processed is gypsum, the facility qualifies as an existing gravel or crushed stone processing plant. Therefore it is subject to A.A.C. R18-2-722, Standards of Performance for Existing Gravel or Crushed Stone Processing Plants.
<b>Fugitive Dust Sources</b>	N/A	Water and other reasonable precautions	<u>A.A.C.</u> R18-2-2-702 Article 6	These standards are applicable to all fugitive dust sources.
<b>Mobile Sources</b>	N/A	Water Sprays/Water Truck for dust control	<u>A.A.C.</u> Article 8	This Article is applicable to off-road mobile sources, which either move while emitting air pollutants or are frequently moved during the course of their utilization.
<b>Spray Painting Operations</b>	N/A	N/A	<u>A.A.C.</u> R18-2-727	This standard is applicable to any spray-painting operation.
<b>Demolition/ Renovation Operations</b>	N/A	N/A	<u>A.A.C.</u> R18-2-1101.A.8	This standard is applicable to any asbestos related demolition or renovation operations.

Unit ID	Year of Manufacture	Control Equipment	Applicable Regulations	Verification
Abrasive Blasting	N/A	N/A	<u>A.A.C.</u> R18-2-726 R18-2-702.B	This standard is applicable to any activity relating to abrasion blasting operations.

## VII. PREVIOUS PERMIT CONDITIONS

### A. Previous Permits

The following table lists the previous permits that have been issued to Phoenix Cement Company:

#### Previous Permits

Date Permit Issued	Permit #	Application Basis
11/20/03	28116	Operating Permit

### B. Previous Permit Conditions

The following are discussions on the previous permits that have been issued to the source.

## CLASS II, NON-TITLE V OPERATING PERMIT NO. 28116

This operating permit was issued to Phoenix Cement Company on November 20, 2003, to operate a crushing and screening plant.

OP #28116, References	Determination				Comments
	Revise	Keep	Delete	Stream-line	
Att. A.	X				General provisions - revised to represent most recent language
Att B.I.A		X			Facility Wide Limitations-Operating Limitations
Att B.I.B		X			Facility Wide Limitations-Record Keeping Requirements

OP #28116, References	Determination				Comments
	Revise	Keep	Delete	Stream- line	
Att B.I.C		X			Facility Wide Limitations-Reporting Requirements
Att B.II.A		X			Crushing, Screening and Wash Plant Requirements-Emissions Limitations-Revised to represent most recent language. Meets requirements for A.A.C. R18-2-722.B.2 because the process weight rate is greater than 30 tons per hour.
Att B.II.B		X			Crushing, Screening and Wash Plant Requirements-Air Pollution Control Requirements-Meets requirements for A.A.C. R18-2-722.D.
Att B.II.C		X			Crushing, Screening and Wash Plant Requirements-Monitoring/Recordkeeping/Reporting-Revised to represent most recent language.-Meets requirements for A.A.C. R18-2-722.F and G.
Att B.III.A			X		Propane Dryer-Fuel Limitation- Section and language were deleted because the facility no longer has this type of equipment.
Att B.III.B			X		Propane Dryer-Particulate Matter & Opacity-Section and language were deleted because the facility no longer has this type of equipment.
Att B.IV			X		Conditions Applicable To Portable Sources-This is a stationary source located at Camp Verde Gypsum mine.
Att B.V		X			Non-Point Sources-Revised to represent most recent language.
Att B.VI		X			Mobile Sources-Revised to represent most recent language.
Att C		X			Equipment List-Updated to most current.

## VIII. MONITORING, RECORDKEEPING AND REPORTING REQUIREMENTS

### A. Facility Wide Requirements

#### 1. Record Keeping Requirements

- a. The Permittee must maintain on-site, records of the manufacturer's specifications for all equipment utilized at the facility.
- b. All records, analyses, and reports must be retained for a minimum of five years from the date of generation. The most recent two years of data must be kept on-site.

#### 2. Reporting Requirements

The Permittee must submit reports of all monitoring activities required in Attachment “B” along with the compliance certifications required by Section VII of Attachment “A”.

**B. Crushing, Screening and Wash Plant Requirements**

1. The Permittee must install, calibrate, maintain, and operate monitoring devices which can be used to determine daily the process weight of gravel or crushed stone produced. The weighing devices shall have an accuracy of  $\pm 5\%$  over their operating range.
2. The Permittee must maintain a record of daily production rates of gravel or crushed stone produced.

**C. Fugitive Dust Requirements**

1. A certified Method 9 observer must conduct a monthly visual survey of visible emissions from the fugitive dust sources. The Permittee must keep a record of the name of the observer, the date and location on which the observation was made, and the results of the observation.
2. If the observer sees a visible emission from a fugitive dust source that on an instantaneous basis appears to exceed applicable opacity standard, then the observer, if practicable, must take a six-minute Method 9 observation of the visible emission.
  - a. If the six-minute opacity of the visible emission is less than or equal to applicable opacity standard, the observer must make a record of the following:
    - i. Location, date, and time of the observation; and
    - ii. The results of the Method 9 observation.
  - b. If the six-minute opacity of the visible emission exceeds applicable opacity standard, then the Permittee must do the following:
    - i. Adjust or repair the controls or equipment to reduce opacity to below the applicable standard; and
    - ii. Report it as an excess emission under Section XII.A of Attachment “A”.

**IX. LIST OF ABBREVIATIONS**

A.A.C.	Arizona Administrative Code
ADEQ	Arizona Department of Environmental Quality
ft	Feet
hr	Hour
lb	Pound
PM	Particulate Matter
PM <sub>10</sub>	Particulate Matter Nominally less than 10 Micrometers
PTE	Potential-to-Emit
TPY	Tons per Year
yr	Year